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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-09/134a/CEMENT/2016-17 Date: 03.09.2016

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*AGENCY		**Technical Manager (West),** KRIDL, Bangalore.
*NAME OF THE WORK	:	Construction of RCC Drains near Aswathkatte surrounding area roads and 4th A, B, C, D, E cross all sides Shettyhalli Sub Division in Ward No.13, BBMP, Bangalore.
REFERENCE		AEE/SSD/PR/58/2016-17 Dated: 02.09.2016
SAMPLE ID	:	Cement – Sample 5
SAMPLE RECEIVED ON	:	02.09.2016
PERIOD OF TESTING	:	02.09.2016 to 03.09.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	29.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	165 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	470 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

Note:

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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-09/134a/SAND-Gradation/2016-17 : 03.09.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Construction of RCC Drains near Aswathkatte surrounding area roads and 4th A, B, C, D, E cross all sides Shettyhalli Sub Division in Ward No.13, BBMP, Bangalore.

Reference : AEE/SSD/PR/58/2016-17 Dated: 02.09.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates - Sample 5

Sample Received on : 02.09.2016

Date of Testing : 03.09.2016

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	91.40	90-100	90-100	90-100	95-100
2.36	73.20	60-95	75-100	85-100	95-100
1.18	52.20	30-70	55-90	75-100	90-100
600 Micron	22.90	15-34	35-59	60-79	80-100
300 Micron	10.20	5-20	8-30	12-40	15-50
150 Micron	3.80	0-10	0-10	0-10	0-15

*Information is furnished by the Customer/Representative.

Remarks : This sample is under Zone-I specific limits.

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Note:

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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-09/134a/AGG/GR/2016-17 : 03.09.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	: Construction of RCC Drains near Aswathkatte surrounding area roads and 4th A, B, C, D, E cross all sides Shettyhalli Sub Division in Ward No.13, BBMP, Bangalore.
Reference	: AEE/SSD/PR/58/2016-17 Dated: 02.09.2016
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm) - Sample 5
Sample Received on	: 02.09.2016
Date of Testing	: 03.09.2016

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	98.55	95-100	85-100
20	36.25	30-70	0-20
10	12.50	10-35	0-5
4.75	2.90	0-5	-

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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-09/134a/AGG/GR/2016-17 : 03.09.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Construction of RCC Drains near Aswathkatte surrounding area roads and 4th A, B, C, D, E cross all sides Shettyhalli Sub Division in Ward No.13, BBMP, Bangalore.

Reference : AEE/SSD/PR/58/2016-17 Dated: 02.09.2016

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (20mm) - Sample 5

Sample Received on : 02.09.2016

Date of Testing : 03.09.2016

Total Wt. of Aggregates in gms= **5000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS :383-1970 (RA- 2007)	
		Graded	Single Sized
40	100	100	100
20	96.06	95-100	85-100
10	33.22	25-55	0-20
4.75	2.90	0-10	0-5

* Information is furnished by the Customer/Representative

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Job No.: CTCE/BBMP/W.No.13/KRIDL/STEEL/2016-17 03.09.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of the Work : Construction of RCC Drains near Aswathkatte surrounding area roads and 4th A, B, C, D, E cross all sides Shettyhalli Sub Division in Ward No.13, BBMP, Bangalore.

Reference : AEE/SSD/PR/58/2016-17 Dated: 02.09.2016

Date of Test : 03.09.2016

Technical Reference : IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	8	0.40	510	552	13.05	O.K	O.K

Note:

⇒ The report shall not be reproduced, except in full, without the written approval of the laboratory.

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Job No.: CTCE/BBMP/W.No.13/KRIDL/STEEL/2016-17 03.09.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of the Work : Construction of RCC Drains near Aswathkatte surrounding area roads and 4th A, B, C, D, E cross all sides Shettyhalli Sub Division in Ward No.13, BBMP, Bangalore.

Reference : AEE/SSD/PR/58/2016-17 Dated: 02.09.2016

Date of Test : 03.09.2016

Technical Reference : IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	513	556	13.20	O.K	O.K

Note:

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T-2377

Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-09/134a/CUBE/2016-17 13.09.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

***Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

***Agency** : **Technical Manager (West),** KRIDL, Bangalore.

***Name of the work** : Construction of RCC Drains near Aswathkatte surrounding area roads and 4th A, B, C, D, E cross all sides Shettyhalli Sub Division in Ward No.13, BBMP, Bangalore.

Reference : AEE/SSD/PR/58/2016-17 Dated: 02.09.2016

***Sample ID** : RCC Drain Bed Slab Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

***Grade of Concrete** : M_{20}

Compressive Strength as on : 7th day

Sample Received on : 13.09.2016

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	06.09.2016	13.09.2016	8.156	338.3	15.04
2	06.09.2016	13.09.2016	8.274	354.7	15.76
3	06.09.2016	13.09.2016	8.362	363.8	16.17

Note: